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VOCABULARY GROWTH THROUGH THE USE OF CONTEXT.  
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\*READING SKILLS, READING COMPREHENSION, \*CONTEXT CLUES,  
\*ELEMENTARY GRADES,

THE USE OF CONTEXT CLUES FOR VOCABULARY DEVELOPMENT IS DISCUSSED. TO THE LIST OF CONTEXTUAL AIDS ALREADY IDENTIFIED--FICTIONAL, VERBAL, EXPERIENTIAL, AND ORGANIZATIONAL--MAY BE ADDED SPOKEN CONTEXT AND SET CONTEXT. THE ADVANTAGES OF USING CONTEXT ARE DISCUSSED, AND AN ANALYSIS OF THE NATURE OF TEXT MATERIAL IS PRESENTED. WAYS OF DEVELOPING EFFECTIVE USES FOR CONTEXT AIDS INCLUDE EMPHASIZING READING FOR MEANING, PROVIDING QUANTITIES OF APPROPRIATE READING MATERIAL, PRETESTING TO DIAGNOSE AND PROVIDING PRACTICE IN NEEDED AREAS, EMPHASIZING CONTEXT CLUE DEVELOPMENT THROUGH ORAL AND LISTENING SITUATIONS, TEACHING STUDENTS TO GO BEYOND A SINGLE WORD IN THE SEARCH FOR MEANING, DISCUSSING HOW MEANING CAN BE DERIVED FROM CONTEXT, PROVIDING ALL TYPES OF CONTENT SITUATIONS, GIVING STUDENTS THE OPPORTUNITY TO APPLY SKILLS, AND DEVELOPING IN STUDENTS A GENERAL APPRECIATION FOR WORDS AND LANGUAGE STRUCTURE. CAUTIONS FOR THE USE OF CONTEXT CLUES AND A BIBLIOGRAPHY ARE INCLUDED. THIS PAPER WAS PRESENTED AT THE INTERNATIONAL READING ASSOCIATION CONFERENCE (SEATTLE, MAY 4-6, 1967). (BK)

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## VOCABULARY GROWTH THROUGH THE USE OF CONTEXT

### SEQUENCE II - VOCABULARY DEVELOPMENT

ELEMENTARY - FRIDAY, MAY 5, 11:00 A.M. - 12:30 P.M.

According to Harris (19) "If the total vocabulary of representative children grows 15,000 words or more during the first six grades...this means an average of at least 2500 words a year, 66 words a week, or 13 words a day -- excluding vacations, weekends, and holidays." This statement suggests that although the vocabulary of basal readers may be controlled, the total reading done by children involves a great number of words. The important point is that if teachers had to teach all the words that children learn, the time required would be exorbitant.

Children who read widely can learn a great many words through use of context. Wide reading provides the opportunity for context, or all

of the elements which give support to meaning, to illuminate word meaning when it is essential to the on-flow of thought and through wide reading the reader will recognize the subtleties and varied meanings which words possess. This idea has its basis in semantics: "We learn the meanings of practically all our words not from dictionaries, not from definitions, but from hearing these noises as they accompany actual situations in life and learning to associate certain noises with certain situations. (23).

#### TYPES AND USES OF CONTEXTUAL AIDS

Artley (1) suggests four types of contextual aids: pictorial context; verbal context; experiential context; and organizational or structural context.

Logical reasoning and research evidence support the validity of pictures as a way of supporting word meaning. Some recent writers obviously question this premise in favor of reading materials for children which omit pictures presumably to focus attention strictly upon "decoding symbols". It is a well established fact that many primary school pupils lack ability to use pictures in constructing the meaning of strange words (4, 33, 34). In its broader sense, pictorial context would also include maps, charts, graphs, and statistical tables and inadequate "reading" and interpreting of these may be hindered by the omission of or de-emphasis of foundational "picture reading" experiences. "Visual context" examples are emphasized in such programs as Gibson-Richards First Steps in Reading English (14).

Of verbal context, a distinction may be made between the two types of acts in which context can be used to figure out the meaning of a word: first, using context in figuring out what the meaning of a word is (The lecturer leaned upon the \_\_\_\_\_ [podium, lectern, etc.] as he spoke.); and second, in using context in unlocking a word which is strange only in print (Jim opened his \_\_\_\_\_ [book, magazine, etc.] and began to read.) In the first case, context is used as an explainer of a meaning which as yet is unfamiliar to the reader or as a determiner of which of several familiar meanings is the one he needs to think for a given word; in the second situation, the reader uses context as a clue, which along with his use of sounds represented by letters stimulates the reader to call to mind simultaneously both the familiar spoken form and the familiar meaning of a given word (30).

By experience cues, Artley refers to the idea that the reader may rely on his past concrete experience, perhaps to a crow's harsh voice, to help clarify the meaning of the last word in the sentence, "The crow cawed raucously." Organizational or structural context refers to such clues in the presentation of the material as sectional or marginal headings, paragraphing, typographical aids, and those aids that are in the familiar patterns of language, as appositive, nonrestrictive, or interpolated phrases or clauses and other language expressions.

A little explored type of context may be referred to as "spoken context", a foundational experience particularly needed at the beginning instructional levels, but appropriate at all grade levels.

Examples of use of this type of context (Bill can play ball, tag, etc. with me.) can be found in McKee and Harrison's Preparing Your Child for Reading (29).

Another context type may be labelled as "set context"; that is, circumstances under the particular which the reader does the reading. This type of context provides much of the content of the study of Semantics, which deals with physical and psychological contexts as well as verbal context.

From consideration of such types of context, it can be reasoned that the uses of context include: (a) perceiving new words on the basis of reasoning and logical inference; (b) checking other word analysis skills; (c) checking on word perception, particularly in case of homographs (tear, hail, lead, etc.) where one must choose the pronunciation and meaning which makes sense in the sentence; and (d) deriving word meanings or trying to find a clue to the meaning of a word and leading toward sensible use of the dictionary... It would seem that these uses of context are legitimate ones to promote in the elementary school if reading is considered a reasoning act, if multiple tools of vocabulary development are desirable, if the vagaries of our language are to be understood, and if one's reading should "make sense."

#### IMPORTANCE AND NEED FOR DEVELOPING THE USE OF CONTEXT

Reading authorities have emphasized for many years the importance of developing effective use of context. For example, McKee (31) writes: "...use of context is the chief means for increasing vocabulary through reading..." McCrimmon (26) states: "...in practice we learn the

the meanings of words by their context...This is exactly how the writers of dictionaries got their definitions." Spache (39) points out: "Eventually contextual analysis becomes one of the most frequently used methods of derivation of word meanings, as phonics and structural analysis decrease in use." Leary (24) advocates: "Train a child to anticipate probable meaning, to infer an unknown word from its total context, to skip a word and read on to derive its probable meaning, to check the context clue with the form of the word, to search the context for a description or explanation that will identify the word, and he will have acquired the most important single aid to word recognition. For regardless of what word he perceives, if it doesn't "make sense" in its setting, his perception has been in error". Fay (11) and Gates (12) have made similar statements supporting the use of context. In speaking of the poor reader, Harris (21) cautions: "...there may be a temptation to assume that pupils who need training in word recognition should be discouraged from attempting to utilize the context at all. Nothing is farther from the truth...All good readers make use of context clues, so there is no reason to discourage poor readers from doing the same..."

Other advantages that accrue to the reader who learns to use context wisely include (a) understanding that a word has no permanent meaning reflects a living language; (b) making use of available material instead of having to go to another source, such as the dictionary; and (c) improving learning to read while reading to learn, thus facilitating integration of skill learning with content learning.

Classroom experience and research investigations suggest that lack of skill in using context is quite prevalent among elementary school pupils. In an early study, Gray and Holmes (16) found that when a context clue was available (in this case an appositional statement) it was not necessarily used to infer a correct meaning. Bradbury (6) found that in attempting to read his textbooks, the average child in the fourth grade can use the context successfully to construct the meaning of a strange word about one out of three opportunities. According to Spache and Berg (40) the average high school graduate uses the context to derive meanings in only about 50 to 60 per cent of the words that are unknown to him. Gibbons (13) found about the same results for the average college freshman. Several studies give us reason to believe that more guidance in the use of contextual analysis provides for growth in this technique. Porter (35) found that primary children can learn to use contextual analysis of simple types quite effectively. When words were completely omitted from the context, these pupils correctly deduced the exact word omitted 23 per cent of the time. They were able to deduce probable meanings of the omitted words 83 per cent of the time. In other words they were successful in contextual analysis for meanings in 8 out of 10 attempts. Harrison (22) also found that context can illuminate word meaning if the necessary guidance is provided for children. Hafner (18) concluded that short-term instruction in the use of context aids seemed to hold promise of improving pupil reading comprehension.

## ANALYSIS OF NATURE OF TEXT MATERIAL

What are the kinds of situations, oral and verbal, that pupils face that need to be presented and practiced if contextual analysis is to become an important tool and means of vocabulary growth? Types of context clues have been analyzed by Artley, McCullough, and Deighton on the basis of their use in books.

Artley (2) has proposed seven types of contextual aids to word meanings from an earlier listing (3): (a) typographical aids, as parentheses or footnotes; (b) grammatical aids such as appositive phrases or clauses; (c) substitute words, as synonyms or antonyms; (d) word elements, as roots, prefixes, and suffixes; (e) figures of speech; (f) pictures, diagrams, and charts; and (g) inference, as "Due to the mountain ranges and the cold climate, the amount of arable land is limited." McCullough (27, 28) has categorized types of contextual clues as (a) experience clues; (b) comparison or contrast words or phrases; (c) synonyms; (d) summary clues; (e) reflection of mood of a situation; (f) definition; and (g) familiar expression, as "He kept his cool." Deighton (9), analyzing the types of context clues found in textbooks on an eighth grade to adult reading level, found context illuminated word meaning through (a) definition; (b) example; (c) modification; (d) restatement; and (e) inference.

It can be noted that there are similarities and overlappings among these listings. Depending upon one's definition of "context", some clues may appear more appropriate than others. Other similar classifications of the instructional specifics in this area of context clues

are suggested by McKee (32) and Betts (5). Which listing or which particular clues seem most useable for the elementary school teacher has not been determined. In the writer's opinion, inference as a context clue would seem to be one of the least used but more promising, and study of word elements (roots, prefixes, and suffixes) has not produced comforting results. It would be helpful to teachers if they knew the context types which appear most commonly in pupil materials and what degree of difficulty each type of contextual clue presents for the pupil. One study (44), for example, suggests that the most difficult context situation for sixth grade children involves use of contrast, such as "Is John clumsy or is he agile?" The connecting word "or" deserves careful treatment as it can join words of similar meaning or words of different meanings as "I had never seen him so depressed ~~or~~ melancholy." and "Is Jim talkative or taciturn?" There is no clue for the reader to use in determining which of the two possible funtions "or" in performing. How to help the young child conceive of an unknown word as referring to a circumscribed meaning rather than to regard the word as carrying with it the whole of a major part of the context in which it appears is still another problem that has received little study. (42).

#### WAYS OF DEVELOPING EFFECTIVE USE OF CONTEXT

It appears to the speaker that there are some basic ideas to be considered in developing the skillful use of context. These would include:

- a. Continue to emphasize reading for meaning. While in the strict sense it may be true that context doesn't give meaning to a word any more than the dictionary does, it is safer to suggest that "symbols signify something" rather than "symbols signify nothing".

b. Provide large quantities of readable material appropriate to interests in "reading class" and the content subjects.(17) The pupil simply cannot use context every fourth or fifth word. Content books frequently present such a high vocabulary load that they hinder seriously the use of context clues by the reader. As Smith and Dechant (38) state: "For one to profit most from context clues, the reading material must not be too difficult, nor contain too many new words. Thus the vividness of contextual clues is proportionate to the ease of the material and the reader's familiarity with the subject."

c. Outline a carefully designed delineation of the set of aids as a context syllabus in the reading area; pre-test to find strengths or weaknesses of the pupils; and then afford practice with the needed abilities through the reading textbooks, workbooks, and other supplementary materials as needed. A teacher's willingness so to individualize the instruction implies the teacher's commitment to the use of contextual technique as an important tool and that it should be developed through planned, thoughtful, and intelligent guidance, just as the ability to

use other means of vocabulary growth are developed through carefully planned instruction. Parenthetically, I would suggest that a standardized test on the use of context could be helpful. The only one at present, Walter N. Durost and Stella S. Center's Word Mastery Test, (Yonkers-on-Hudson: World Book Co., 1952), is for use at grades 9-12. Such a test for the elementary school years would attempt to yield evidence on the extent to which the pupil is able to learn the meanings of unknown words by seeing them in typical context situations.

- d. Provide greater emphasis to context clues development with oral and listening situations, prior to and along with application to verbal reading materials. Encourage pupils to anticipate outcomes or predict what the next part of the story will be. Further exploration is needed into the area of "spoken context", for the pupil who cannot use the clues of context in listening will likely have little if any more control of them in the reading act. On the contrary, it has been suggested (37) that better training in "spoken-listening context" can be used to improve the pupils' ability to understand adequately what he attempts to read.

e. Teach the child to go beyond the single word in search for the meaning by context. One study (41) suggests that the words that follow a strange word are/ likely to aid in contextual analysis more than those that precede it. This confirms the desirability of teaching pupils to read the entire sentence (or rest of paragraph) before attempting to derive the meaning of an unknown word. The practice of immediately stating, "Look it up in the dictionary" is a poor one. It would be better to say "Try to find a clue to the meaning of the word through the context." The pupils need to know that the context needed for constructing the meaning of a given strange word may appear before, after, or both before and after the strange word, (15). It should be recognized that there is some evidence that the influence of context upon word meanings seems to decrease rapidly with the distance of the context, and context more than about five words distant has relatively little effect upon clarifying an unknown word. ~~and that the influence of context upon word meanings seems to decrease rapidly with the distance of the context, and context more than about five words distant has relatively little effect upon clarifying an unknown word.~~

f. Provide time for discussion of how meaning can be derived through context. Discuss with pupils what is meant by using context to figure out the meaning of a word; what the helpful parts of the context may be and where they appear. Also pupils need to

recognize the situation where no clue is

provided, as "Bill was reluctant to do it."

g. Capitalize upon context in all types of content reading situations. Teach pupils the common ways textbooks may new meanings easy to acquire. Study the context books used to see how the new terms are made understandable, and let the pupils in on this study. Context reveals meaning by outright definition ("Draw an array of dots, an orderly arrangement of dots in columns and rows, to suggest the number 15."). It reveals meaning by citing examples and frequently employs signal words: such as, such, like, especially, or for example. (Put an antiseptic such as alcohol on the skin). When such signal words are not used, the verb to be is used to show the connection. (The degree of loudness or softness with which syllables are uttered is called stress.) Another common method used is the explaining of an unfamiliar word through the use of modifiers. Still another method by which context reveals meaning is through restatement -- using such introductory words as in other words, that is, to put it another way, or which is to say. (They learned that muskets, that is guns, were hidden in the box.) At times only dashes or parentheses are used (The

epidermis -- the outer layer of skin -- protects us from germs,) As suggested earlier, a synonym for the word may be a clue (What can you do to mitigate, or lessen, your chance of catching cold?) Apposition is a common device (They went to see the aviary, a place where birds are kept.) as is also a set of words in contrast (Should bats be eradicated? No, let them live because...) Often the meaning is implied by the rest of the sentence (John will be here soon for he is usually very punctual.)

- h. Delay discussion of the meaning of a strange word in the reading material or content subjects if the context is provided by familiar words for building that meaning. Pupils must have an opportunity for application for taught skills in the normal reading situation. Occasionally the teacher might select a half-dozen difficult words from future reading assignments and ask pupils to write their definitions. After the reading, pupils may correct or revise their earlier definitions. This is particularly applicable at the intermediate school level.
- i. Develop a general appreciation for words and language structure. Through experience and instruction, the pupil needs to appreciate denotations

and connotations of specific words and multiple meanings for the same word. He needs to be guided to anticipate the fact that pronunciation and meaning of homographs such as bow, refuse, and wind cannot be verified until seen in "use situations". He needs to recognize that homonyms may be spelled alike (cold hail, or hail a cab) or may be spelled differently (stake, steak). He certainly should expect irregularities in the alphabetic representations of English sounds (head, break, early, etc.) Further, the pupil needs to sense the importance of the order of words to the structure of our language and/or meaning. By the position of words in the sentence, the functions of the words, and to this extent, their meanings are suggested.

(27). "The igg ogged the ugg" type of presentation may help pupils recognize the nounness or verbness of the words. This helps the pupil sense that nouns and verbs are most essential for meaning. The structure of the phrase, sentence, or paragraph often serves as a clue to the meaning of what is written.

Rhetorical terms of coherence are also guides to reading comprehension of a paragraph, pure conjunctions and certain adverbs being very common

links. (36). The fact that many of the contextual clues to word meaning have their origin in such concepts provides a strong argument for the development of general knowledge of language structure, and suggests again, the interrelationships of the language arts (45).

### CAUTIONS IN THE USE OF CONTEXT CLUES

It is not possible to develop the effective use of context clues in situations where the child is bogged down with the mechanics of reading. Wide independent reading -- where little difficulty with word recognition or meaning is presented -- gives the pupil an opportunity to use contextual aids. But "opportunity" alone is not enough. As in other skills of reading, studies from Boston University (7, 8, 10, 25, 43) reaffirm that children in the intermediate grades vary greatly in their ability to identify words and to derive meaning from context. Children with poor reading ability usually cannot identify words they do not know. Unless children are taught to notice unfamiliar words to be alert to the connection between the context and the unknown word it bears upon, and/~~the context~~, they are unlikely to develop large vocabularies from extensive reading.

It must be clear that the child will not always gain the correct meaning of a word from the context. Context always determines the meaning of a word, but doesn't always reveal that meaning. Context generally reveals only one of the meanings of an unfamiliar word...It is worth saying to children over and over again that no word has one fixed or unalterable meaning, that no one context revelation will suffice for all the later uses of the word which may be met. Also, context seldom clarifies the whole of any single word meaning. Context will often provide a synonym, but synonyms are never exact equivalents.

Avoid instructing the child to "guess the word". Finding out through context means the child carefully considers the meaning implied

in a sentence or paragraph as a whole and in light of this meaning he reasons what the unknown word might be.

Avoid overuse or complete dependance upon context alone. In reading clinics, it is noted that a classical faux pas of some remedial readers is to over-use context clues, sometimes putting together a reasonable facsimile, but an inaccurate one. Usually this approach eventually breaks down completely, which suggests that pupils should be encouraged to use different methods of working out a word and its meaning, as well as using combined methods. It is better for the child to have several different tools to unlock new words and their meanings so that if one fails, the reader has another one to use or to serve as a check.

Finally, vocabulary growth through context revelation is a gradual one. It is a matter of finding one clue here and another there, of fitting them together, of making tentative judgments and revising them as later experience requires. It is building meaning into a word over a period of years through the combined experiences of the writer and the reader.

#### REFERENCES

1. Artley, A. Sterl, "Developing the Use of Context" in Developing Vocabulary and Word-Attack Skills, A Report of the Eighteenth Annual Conference and Course on Reading, Pittsburgh: University of Pittsburgh, 1962, pp. 91-98.
2. Ibid., p. 95.
3. Artley, A. Sterl, "Teaching Word Meaning Through Context," Elementary English Review, 10 (February, 1943), 68-74.

4. Beck, G., The Ability of First Grade Pupils to Use Pictures in Constructing the Meanings of Strange Words, Master's Thesis, State College of Education, Greeley, Colorado, 1940.
5. Betts, Emmett A., Foundations of Reading Instruction, N.Y.: American Book Co., 1957, pp. 581-582. (Also see pp. 601-611).
6. Bradbury, Helen, The Ability of Fourth Grade Pupils to Construct the Meaning of a Strange Word from Context, Master's Thesis, State College of Education, Greeley, Colorado, 1943.
7. Burgand, Joan F., An Investigation of Abilities of Fifth and Sixth Graders to Derive Meaning from Context in Silent Reading, Master's Thesis, Boston University, Boston, Massachusetts, 1950.
8. Butler, Huldah A., Finding Word Meanings from Context in Grades Five and Six, Master's Thesis, Boston University, Boston, Massachusetts, 1943.
9. Deighton, Lee C., Vocabulary Development in the Classroom, Bureau of Publications, Teachers College, Columbia University, 1959.
10. Elivian, Jeannette, Word Perception and Word Meaning in Silent Reading in the Intermediate Grades, Master's Thesis, Boston University, Boston, Massachusetts, 1958.
11. Fay, Leo C., Reading in the High School, Department of Classroom Teachers, AERA, Washington, 1956, p. 18.
12. Gates, Arthur I., The Improvement of Reading, N. Y.: The Macmillan Co., Revised, 1947, p. 241.
13. Gibbons, Helen, The Ability of College Freshman to Use Context to Construct the Meaning of Unknown Words, Doctor's Field Study, No. 2, State College of Education, Greeley, Colorado, 1940.
14. Gibson, C. M. and I. A. Richards, First Steps in Reading English, New York: Pocket Books, Inc. 1957.
15. Godfrey, Grace, A Study of Context as a Means of Explaining the Meanings of Strange Words in Certain Children's Books, Master's Thesis, State College of Education, Greeley, Colorado, 1941.
16. Gray, William S. and Eleanor Holmes, The Development of Meaning Vocabularies in Reading, Chicago: University of Chicago Press, 1938, p. 1.
17. Gray, William S., On Their Own in Reading, Chicago, Scott, Foresman and Co., Revised Ed., 1960.
18. Hafner, Laurence E., "A One-Month Experiment in Teaching Context Aids in the Fifth Grade," The Journal of Educational Research 63 (July-August, 1965) 472-474.

19. Harris, Albert J., Effective Teaching of Reading, N.Y.: David McKay, Co., 1962, pp. 220-221.
20. Ibid., p. 194.
21. Harris, Albert J., How to Increase Reading Ability, N.Y.: Longmans, Green and Co., Fourth Edition, 1961, p. 374.
22. . . . Harrison, Janice Mantle, Acquiring Word Meaning Through Context Clues, Master's Thesis, Ohio State University, Columbus, Ohio, 1960.
23. Hayakawa, S. I., Language in Thought and Action, N.Y.: Harcourt, Brace and Co., 1949, p. 57.
24. Leary, Bernice, "Developing Word Perception Skills in Middle and Upper Grades," Current Problems in Reading Instruction, Pittsburgh: University of Pittsburgh Press, 1951, p. 25.
25. McAuliffe, Mary E., Getting Meaning from Context in Grade Four, Master's Thesis, Boston, University, Boston, Massachusetts, 1950.
26. McCrimmon, James, M., Writing with Purpose: A First Course in Composition, Boston: Houghton-Mifflin, 1957, p. 157.
27. McCullough, Constance M., "Context Aids in Reading", The Reading Teacher, 11 (April, 1958), 225-229.
28. McCullough, Constance M., "Recognition of Context Clues in Reading", Elementary English Review, 22 (January, 1956) 1-5.
29. McKee, Paul and Lucille Harrison, Program in Skills Basic to Beginning Reading, Boston: Houghton-Mifflin Co., 1960.
30. McKee, Paul, Reading: A Program of Instruction for the Elementary School, Boston: Houghton-Mifflin Co., 1966, p. 264. (Also see pp. 258 - 268).
31. Ibid., p. 262.
32. McKee, Paul, The Teaching of Reading, Boston: Houghton-Mifflin Co., 1948.
33. Miller, W., Reading With and Without Pictures in the Primary Grades, Doctor's Field Study, No. 2, State College of Education, Greeley, Colorado, 1938.
34. Miller, W., What One Hundred Third Grade Children Saw in Six Pictures, Doctor's Field Study, No. 2, State College of Education, Greeley, Colorado, 1938.

35. Porter, Douglas, "The Instrumental Value of Sound Cues in Reading", Paper read at the AERA Convention, Atlantic City, February 17, 1960.

36. Shaw, Philip, "Rhetorical Guides to Reading Comprehension", The Reading Teacher, 11 (April, 1958), 239-243.

37. Sister, Mariam, O. P., "Context Clues in Primary Reading", The Reading Teacher, 11 (April, 1958), 230-234.

38. Smith, Henry P., and Emerald V. Dechant, Psychology in Teaching of Reading, Englewood Cliffs: Prentice Hall Inc., 1961, p. 219.

39. Spache, George D., Reading in the Elementary School, Boston: Allyn and Bacon, Inc., 1964, p. 216.

40. Spache, George D., and Paul C. Berg, The Art of Efficient Reading, New York: The Macmillan Co., 1955, p. 109.

41. Weaver, Wendell, "The Predictability of Word Meaning", New Developments in Programs, Training Aids and Procedures, National Reading Conference Proceedings, 12 (1963), 152-157.

42. Werner, Heinz, and Edith Kaplan, "Development of Word Meaning Through Verbal Context: An Experimental Study," Journal of Psychology, 29 (April, 1950), 251-257.

43. White, Loretta M., The Ability of Fifth Grade Pupils to Get Word Meaning from Context, Master's Thesis, Boston University, Boston, Massachusetts, 1950.

44. Wilson, Frank E., The Ability of Sixth Grade Children to Acquire the Meaning of a Strange Word from Context, Master's Thesis, State College of Education, Greeley, Colorado, 1947.

45. Zames, Wilbur S., "A Study of the Process by Which Readers Determine Word Meaning Through the Use of Context" unpublished doctoral dissertation, University of Missouri, Columbia, Missouri, 1965.

#### ADDITIONAL SOURCES OF MATERIALS ON CONTEXTUAL CLUES

A. A. De Vitis and J. R. Warner, Words in Context: A Vocabulary Builder, Second Edition, New York: Appleton-Century Crofts, 1966.

Bernard Kingsly, Reading Skills, San Francisco: Fearon Publishers, Inc., 1958.

Virginia Middlemas, et al., Contextual Clues, New York: Center for Programmed Instruction, 1965.

David H. Russell and Etta E. Karp, Reading Aids Through the Grades,  
New York: Bureau of Publications, Teachers College, Columbia University,  
1951.

Guy Wagner and Max Hosier, Reading Games: Strengthening Reading Skills  
With Instructional Games, Darien, Connecticut: Teachers Publishing  
Corporation, 1960.